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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,208	05/14/2001	Nanette C. Jensen	10013325-1	9811

7590 03/24/2005

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EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/855,208	Applicant(s) JENSEN ET AL.	
	Examiner Jeffrey R. West	Art Unit 2857	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 23 February 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The reply was filed after the date of filing a Notice of Appeal, but prior to the date of filing an appeal brief. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

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Applicant first argues that "in the Final Office Action, the Examiner cited column 2, lines 49-58 of Gamgee as showing or suggesting 'wherein saturation of the sensing optical detector circuit is detected by producing first and second magnitude outputs, at first and second times, relating to first and second light source intensities (col. 2, lines 49-58)' . . . Then, in the 'Response to Arguments' on page 6 of the Final Office Action, the Examiner states that the cited portion of Gamgee was relied upon by the Examiner to teach the simple fact that the detector produces magnitude outputs related to incident light source. Applicants objects to the apparent revision in the interpretation of Gamgee in this respect."

The Examiner asserts that the Final Office Action specifically stated, "Gamgee teaches a signal discriminator including a light source and a sensing optical detector circuit that produces an output corresponding to the intensity of the light source (column 3, lines 16-25) wherein saturation of the sensing optical detector circuit is detected by producing first and second magnitude outputs, at first and second times, related to first and second light source intensities (column 2, lines 49-58) and determining when a difference between the first and second outputs are not significant as compared to a predetermined significance value/threshold (column 2, line 65 to column 3, line 11)." The Examiner maintains that reference to "column 2, lines 49-58" is only to point out where Gamgee teaches the feature of "related to first and second light source intensities" while the support for saturation detection is taught in "column 2, line 65 to column 3, line 11".

Applicant then argues that "Gamgee merely teaches the fact that sensors can be saturated such that the output produced by them does not vary in response to a varying input once saturation is reached. In order for the circuit of Gamgee to operate properly, a compensation circuit is designed to ensure that the sensor continuously operates in an operational range so that saturation is avoided. However, the avoidance of saturation is accomplished not by detecting where saturation exits as asserted by the Examiner. Rather, the saturation is avoided by providing a compensation circuit that adjusts the operating point of the sensor in an appropriate way as can be appreciated with those of ordinary skill in the art. In addition, Gamgee teaches the generation of a constant analog signal from the sensor, not multiple readings as assumed by the Examiner. Gamgee does not generate a first output signal related to a first radiation and a second output related to a second radiation. Also, Gamgee does not repeat the process until saturation level is detected. Rather, Gamgee merely receives incident radiation and generates an output signal whereby, wherein the compensation circuit ensures that the sensor does not become saturated over time as the background noise of the incident radiant light changes with time."

The Examiner maintains the rejection for the following reasons.

Lisson discloses a control circuit for applying first and second intensities of the light source at first and second times (column 3, lines 12-13, "The light source 10 is driven by control electronics 24 that controls the intensity of the light source") through the altering of voltage or current levels applied to the light source by predefined amounts (column 3, lines 40-45, "Control electronics 22 is programmed to supply a series of predetermined signals (voltage or current) levels that step light controller through a series of operations which supply appropriate electrical control signals (voltage or current) levels which provide light level magnitudes corresponding to said signals") to sequence the intensity of the of the light source from zero amplitude to a maximum level causing the image sensor to saturate (column 3, lines 45-49, "The control electronics 22 is programmed to provide a sequence of illuminance levels ranging from zero amplitude to some maximum level (e.g. the level at which image sensor 14 reaches saturation"), wherein the image sensor array produces corresponding first and second outputs based on the source intensity (column 3, lines 20-27, "In operation, the light source 10 is positioned in form of the image senor 14 and a stepwise series of voltages are applied to the light source to produce several levels for illumination. The image sensor 14 is actuated at each illumination level and the resulting images are captured and stored").

Therefore, while Lisson does disclose applying a first current to a light source to generate the light output during a first time period, obtaining a first measure of the light output during the first time period, applying an altered current to the light source to generate the light output during a second time period, obtaining a second measure of the light output during the second time period, and sequentially stepping the current until the sensor saturates, Lisson does not specifically include a corresponding means for determining the occurrence of the saturation.

Gamgee then is included to teach detecting sensor saturation by producing first and second magnitude outputs, at first and second times, related to first and second light source intensities (column 2, lines 49-58, "The discriminating apparatus of FIG. 2 acts as the detector 11 of FIG. 1 and includes an incident signal sensing means 20 sensitive to an incident radiant signal 10 comprising both radiant information signal and radiant background signal to generate an output sensing signal 21 of a level related to the level of the incident signal 10") and determining when a difference between the first and second outputs are not significant as compared to a predetermined significance value/threshold (column 2, line 65 to column 3, line 11, "The sensing means 20 generates, in response to incident radiation 10, an output signal 21 of magnitude related to the incident radiation level up to a saturation level of the output signal 21, beyond which saturation level, any changes in incident radiation level do not produce significant changes in magnitude of the output sensing signal 21") (i.e. saturation is detected by applying inputs at first and second times to determine if the difference between outputs of the sensing means produced at the first and second times meets a significance level).

Therefore, the combination of Lisson's teaching of applying first and second current to generate and obtain first and second light outputs of a sensor until saturation is detected with Gamgee's teaching of determining saturation by determining when the difference between the first and second measures of light is significant as compared to a significance value/threshold, meets the invention as claimed.

Applicant then argues that "Uebbing merely teaches measuring the light output of LEDs at two separate times to determine a degradation of light output over the time period between measurements. . . In this respect, Uebbing is not detecting a 'percentage increase' between two measurements, but the amount of degradation in the light output".

The Examiner maintains that the combination of Lisson, Gamgee, and Shiota already teaches determining a difference between sensor output levels that is compared to a predetermined significance threshold to determine if saturation exists, as well as performing compensation by increasing and decreasing a driving signal. The invention of Uebbing then teaches obtaining the light output

measures of two different pulse-width values and comparing the difference between these values to determine the percentage increase, of the second measure relative the first measure, needed to meet the desired output level deviation/difference (column 5, lines 1-22), thereby arriving at the claimed invention.